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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/876,230

06/08/2001

Vaughn E. Keenan

204694.00073

6194

27160 7590 01/13/2009  
KATTEN MUCHIN ROSENMAN LLP  
(C/O PATENT ADMINISTRATOR)  
2900 K STREET NW, SUITE 200  
WASHINGTON, DC 20007-5118

EXAMINER

MISLEH, JUSTIN P

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

01/13/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/876,230	<b>Applicant(s)</b> KEENAN ET AL.	
	<b>Examiner</b> JUSTIN P. MISLEH	<b>Art Unit</b> 2622	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-26,28-42,44-52,54-64 and 66-113 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-26,28-42,44-52,54-64 and 66-113 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed October 9, 2008 have been fully considered but they are not persuasive.
2. Applicant argues, "The output image of the Ishikawa electronic blackboard therefore does NOT include all pen strokes entered on the writing surface irrespective of the pen tool used to make the pen strokes or irrespective of pen stroke color."
3. The Examiner has addressed this argument in numerous Office Actions - the latest being the Advisory Action mailed August 8, 2007. Applicant is advised to review Examiner's response from that Action.
4. Applicant further argues, "Independent claims 1, 23, 74 and 79 recite that the image data is processed to form output digital images ... and that the output digital images are grouped according to user-defined (operator-defined) sessions ... no image grouping by session is performed by Ishikawa."  
  
"Independent claims 42, 51, 56, 62, 68 and 85 recite that the image data is processed to form an output image ... and that the output digital images are grouped according to user-defined (operator-defined) session ... no image grouping by session is performed by Ishikawa."
5. With respect to Applicant's arguments for Claims 1, 4 – 22, 96 and 97, the Examiner respectfully disagrees with Applicant's position. First of all, multiple captured images is not required for independent Claim 1. Second of all, while Ishikawa may not provide an image

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grouping session involving at least one captured image; Shigehiro the secondary reference relied certainly does.

6. With respect to the claim language, Claim 1 recites, *inter alia*, “**said at least one digital camera being oriented so that** the field of view thereof encompasses said writing surface **and capturing images of said writing surface**; and a controller in communication with said at least one digital camera, said controller receiving image data from **said at least one digital camera for each captured image** and processing said image data to form an output digital image of said writing surface” (emphasis added by Examiner). While the recited portion is replete with grammatical errors, this language certainly does not state nor does it imply that more than digital image must be captured and that a session can only be comprised of a plurality of digital images. In other words, a session may comprise just a single digital image. Furthermore, the Examiner respectfully notes the claim language does not define exactly what a session is or how it is formed and newly added dependent Claims 96 and 97 do not explicitly define what is required by a user to start and end the session.

7. With respect to the prior art, Komori (of which a human English-language translation was provided by Schreiber Translation in March 2007 are attached to the Non-Final Office Action mailed April 9, 2008) clearly describes user involvement in capturing and operating the whole electronic blackboard operations. More specifically, Komori describes, in paragraph 0013, “actuation of the electronic blackboard of this embodiment is explained. If a user moves the camera bearing bar 302 in the direction of arrow-head A, an electronic camera 4 is moved in the direction of arrow-head B, an electronic camera 4 is turned to a feltboard 1 and directions of copy initiation of the image of a feltboard 1 are given from the control unit 501 of a printer 5.

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First, a stroboscope 404 emits light, it aligns with this and a shutter 402 opens, and by the CCD sensor 403, a feltboard 1 is read. The image data for one read screen is transmitted to a printer 5, and is stored by memory 503. Next, the image data which amended quantity of light nonuniformity with the operation means 407 based on the quantity of light adjustment data stored by this image data and memory 506 is computed, the image data after the computed adjustment is transmitted to the thermal head array 505 through a printer driver 504, and an image is formed in a thermal paper 6.” Therefore, it is clear that at least one image is captured in a session and that session is controlled/operated by a user. For this reason, the rejection of Claims 1 and 4 – 22 will be maintained.

8. Applicant's arguments with respect to Claims 23 – 26, 28 – 42, 44 – 52, 54 – 64 and 66 – 113 have been considered but are moot in view of the new grounds of rejection.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1, 4, 12, 56 – 58, 68, 74, 96, 97, 102, 103, 106, 107, 108 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Komori et al. (JP 08-108689 A).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for

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Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

11. For **Claim 1**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a camera-based system for capturing images of a writing surface (2) comprising:

a generally horizontally extending boom assembly (clearly shown in figure 1; although not expressly labeled), said boom assembly being positioned above said writing surface (As clearly shown in figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the target area 2);

at least one digital camera (“color camera 9”) mounted on said boom assembly at a location spaced from the plane of said writing surface (“field 2”; seen clearly from figure 1), said at least one digital camera (9) being oriented so that the field of view thereof encompasses said writing surface (2) and capturing images of said writing surface; and

a controller (output unit 21) being in communication with said at least one digital camera (9), said controller (21) receiving image data from said at least one digital camera (9) for each captured image and processing said image data to form an output digital image of said writing surface (2) each output digital image data comprising including all visible writing thereon irrespective of color (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

However, Ishikawa et al. is silent with respect to the boom assembly having a length of from about 30 to 50 inches or where said controller grouping output digital images according to user-defined sessions, as claimed.

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On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Therefore, the Examiner concludes that angle A in figure 2 is a 60-degree angle and the adjacent sides, one of which is the boom assembly, are each 35 inches (i.e., exactly half the width of the blackboard writing surface indicated by Komori et al.). Thus, Komori teaches the boom assembly having a length of from about 30 to 50 inches, as claimed. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated the boom assembly having a length of from about 30 to 50 inches and where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system with a boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing a boom assembly that is of an easy configuration for easy movement such that the boom is able to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

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12. As for **Claim 4**, Ishikawa et al. disclose, as clearly shown in figure 1, wherein the boom assembly (not expressly labeled) includes a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two* boom arms) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting said at least one digital camera (9).

13. As for **Claim 12**, Ishikawa et al. disclose, as clearly shown in figure 1, wherein said camera head (9) supports a single digital camera (9).

14. As for **Claims 96, 102, 106 and 108**, Komori et al. further teach, in paragraph 0013, wherein said user-defined sessions are defined by user input to said controller.

15. As for **Claims 97, 103, 107 and 109**, Komori et al. further teach, in paragraph 0013, wherein said user input defines the start and end of each session.

16. For **Claim 56**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a system for capturing images of a writing surface (2) comprising:

a boom (clearly shown in figure 1; although not expressly labeled) extending outwardly from a wall surface (The Examiner considers to the *blackboard surface 2* to be a *wall surface*, as claimed.) and being positioned above said writing surface, said boom being fixed and stationary in relation to said writing surface (As clearly shown in figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the target area 2; the boom is fixed to a support structure of the writing surface);



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an optical recording device (“color camera 9”) mounted on said boom at a location laterally spaced from said writing surface (“field 2”; seen clearly from figure 1), said optical recording device (9) being aimed towards said writing surface (2); and

a controller (output unit 21) in communication with said optical recording device (9), said controller (21) conditioning said optical recording device to acquire an image of said writing surface in response to operator input (not explicitly recited; however, all electronic devices inherently require at least some operator input, such as powering the device on/off) and processing the acquired at least one image to yield a digital output image, said digital output image comprising all visible pen strokes on said writing surface irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing

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surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

17. As for **Claim 57**, Ishikawa et al. disclose, as shown in figure 1, wherein said boom is positioned adjacent the midpoint of said writing surface (2).

18. As for **Claim 58**, Ishikawa et al. disclose, as clearly shown in figure 1, wherein the boom (not expressly labeled) includes a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom arm (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) accommodating said optical recording device (9).

19. For **Claim 68**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a system for capturing images of a writing surface (2) comprising:

a boom (clearly shown in figure 1; although not expressly labeled) extending outwardly from a wall surface (The Examiner considers to the *blackboard surface 2* to be a *wall surface*, as claimed.) and being positioned above said writing surface to be imaged (As clearly shown in

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figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the target area 2);

an digital camera device (“color camera 9”) mounted on said boom at a location laterally spaced from said wall surface (“field 2”; seen clearly from figure 1), said digital camera device (9) being actuable to capture an image of said writing surface (2); and

a controller (output unit 21) in communication with said digital camera device (9), said controller (21) conditioning said digital camera device to capture at least one image of said writing surface in response to operator input (not explicitly recited; however, all electronic devices inherently require at least some operator input, such as powering the device on/off), and processing the acquired the at least one image to yield a digital output image, said digital output image comprising all visible pen strokes on said writing surface irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

Ishikawa et al. disclose wherein the wall surface is coterminous with the writing surface, but do not specify where the controller is positioned. Accordingly, Ishikawa et al. do not disclose wherein the controller is mounted on the wall surface and/or one side of said writing surface.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of mounting a controller on a wall surface/writing surface are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have mounted the controller on the wall surface/writing surface of

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Ishikawa et al. for the advantage of *providing a controller that is of an easy configuration such that the controller is able to avoid becoming a user's trouble in a time of non-use.*

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1).

Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35" by 70") and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

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20. For **Claim 74**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, an imaging system to capture an image of a write board (2), said imaging system comprising:

a boom (clearly shown in figure 1; although not expressly labeled) configured to extend outward from said write board (The Examiner considers to the *blackboard surface 2* to be a *wall surface*, as claimed.) and above said write board (As clearly shown in figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the target area 2);

an imaging device (“color camera 9”) mounted on said boom at a location laterally spaced from said write board (“field 2”; seen clearly from figure 1), said imaging device (9) being actuable to capture an image of said write board (2); and

a controller (output unit 21) in communication with said digital camera device (9), said controller (21) conditioning said digital camera device to capture at least one image of said writing surface in response to operator input (not explicitly recited; however, all electronic devices inherently require at least some operator input, such as powering the device on/off), and processing the acquired the at least one image to yield a digital output image, said digital output image comprising all visible pen strokes on said writing surface irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

Ishikawa et al. disclose wherein the wall surface is coterminous with the write board, but do not specify that the (a) write board is mounted on the wall surface or where the controller is

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positioned. Accordingly, Ishikawa et al. do not disclose (b) wherein the controller is mounted on the wall surface and/or one side of said writing surface.

In regards to (a), **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of mounting a writing surface (e.g., whiteboard or blackboard) on a wall are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have mounted the writing surface of Ishikawa et al. on a wall such that the boom assembly extends horizontally outward from the board mounted on the wall for the advantage of *reducing the effects of variable illumination and shadow casting on the writing surface of the board*.

In regards to (b), **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of mounting a controller on a wall surface/writing surface are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have mounted the controller on the wall surface/writing surface of Ishikawa et al. for the advantage of *providing a controller that is of an easy configuration such that the controller is able to avoid becoming a user's trouble in a time of non-use*.

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1).

Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface

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has common dimensions of 900 mm by 1800 mm (~ 35" by 70") and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

21. **Claims 5, 59 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Komori et al. (JP 08-108689 A) in further view of Haskin (US 5,790,910).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

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22. As for **Claim 5**, Ishikawa discloses a wall mount (as recited above); however, Ishikawa is silent with respect to the structural details of the wall mount. Specifically, Ishikawa is silent with respect to the wall mount being releasably coupled to a wall plate secured to said wall surface.

On the other hand, Haskin also provides a camera system for capturing an image of a target area. Specifically, Haskin teaches, as shown in figure 1, a camera (22) attached to a distal end (28) of a boom assembly (20) mounted, via a wall mount (37), on a wall surface (23).

Haskin additionally teaches, as further shown in figure 1, the wall mount (37) being releasably coupled (via screws 34) to a wall plate (38) secured to said wall surface (23).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporate the wall mount being releasably coupled to a wall plate secured to said wall surface (as taught by Haskin) in the camera system with boom assembly mounted on a wall surface (as disclosed by Ishikawa) for the advantage of *providing a mounting assembly that is easy to adjust once in place and that permits mounting directly to an electrical junction box* (see Haskin; column 1, lines 14 – 25).

23. As for **Claim 59**, Ishikawa discloses a wall mount (as recited above); however, Ishikawa is silent with respect to the structural details of the wall mount. Specifically, Ishikawa is silent with respect to the wall mount being releasably coupled to a wall plate secured to said wall surface.

On the other hand, Haskin also provides a camera system for capturing an image of a target area. Specifically, Haskin teaches, as shown in figure 1, a camera (22) attached to a distal end (28) of a boom assembly (20) mounted, via a wall mount (37), on a wall surface (23).



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Haskin additionally teaches, as further shown in figure 1, the wall mount (37) being releasably coupled (via screws 34) to a wall plate (38) secured to said wall surface (23).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporate the wall mount being releasably coupled to a wall plate secured to said wall surface (as taught by Haskin) in the camera system with boom assembly mounted on a wall surface (as disclosed by Ishikawa) for the advantage of *providing a mounting assembly that is easy to adjust once in place and that permits mounting directly to an electrical junction box* (see Haskin; column 1, lines 14 – 25).

24. As for **Claim 71**, Ishikawa discloses a wall mount (as recited above); however, Ishikawa is silent with respect to the structural details of the wall mount. Specifically, Ishikawa is silent with respect to the boom being coupled to a mount that is secured to said wall surface.

On the other hand, Haskin also provides a camera system for capturing an image of a target area. Specifically, Haskin teaches, as shown in figure 1, a camera (22) attached to a distal end (28) of a boom assembly (20) mounted, via a wall mount (37), on a wall surface (23). Haskin additionally teaches, as further shown in figure 1, the boom (20) being coupled to a mount (37) that is secured to said wall surface (23).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporate the boom being coupled to a mount that is secured to said wall surface (as taught by Haskin) in the camera system with boom assembly mounted on a wall surface (as disclosed by Ishikawa) for the advantage of *providing a mounting assembly that is easy to adjust once in place and that permits mounting directly to an electrical junction box* (see Haskin; column 1, lines 14 – 25).

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25. **Claims 6 – 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Komori et al. (JP 08-108689 A) in further view of Byrd et al. (US 6,633,328 B1).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

26. As for **Claim 6**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said boom assembly is articulated and moveable between an extended operating position and a folded retracted condition*.

In analogous art, Byrd et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward from a wall surface. Specifically, Byrd et al. teach, as shown in figure 1, a camera system with a digital camera (20) capturing an image of a target area (10), wherein the digital camera is attached to the distal end (14) of a boom assembly (see figures 9 – 11), wherein the boom

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assembly extends outward from a wall surface (134). However, Byrd et al. additionally teach, as shown in figures 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said boom assembly is articulated and moveable between an extended operating position and a folded retracted condition.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a boom assembly that is articulated and moveable between an extended operating position and a folded retracted condition (as taught by Byrd et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing 360° image rotation such that a single user may be able to properly orient the camera system and generate understandable video images* (see Byrd et al.; column 2, lines 11 – 35).

27. As for **Claim 7**, Byrd et al. disclose, as shown in figures 1 and 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said boom assembly includes a pair of hinges at spaced locations along said boom to enable said boom to fold over itself.

28. As for **Claim 8**, Byrd et al. disclose, as shown in figures 1 and 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein each of said hinges includes a locking mechanism to retain said boom assembly in said extended operating position (A “slip ring”, which Byrd et al. provide, is a locking mechanism.).

29. As for **Claim 13**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a

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camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said writing surface, images of adjacent distinct sections of said writing surface overlapping.*

In analogous art, Byrd et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward from a wall surface. Specifically, Byrd et al. teach, as shown in figure 1, a camera system with a digital camera (20) capturing an image of a target area (10), wherein the digital camera is attached to the distal end (14) of a boom assembly (see figures 9 – 11), wherein the boom assembly extends outward from a wall surface (134). However, Byrd et al. additionally teach, as shown in figures 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said writing surface, images of adjacent distinct sections of said writing surface overlapping (The 360° camera movement of Byrd et al. corresponds to the claimed “arc”).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said writing surface, images of adjacent distinct sections of said writing surface overlapping. (as taught by Byrd et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of

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*providing 360° image rotation such that a single user may be able to properly orient the camera system and generate understandable video images (see Byrd et al.; column 2, lines 11 – 35).*

30. **Claim 9 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Komori et al. (JP 08-108689 A) in further view of Saund et al. (US 6,570,612 B1).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

31. As for **Claim 9**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said camera head supports a plurality of digital cameras, each of said digital cameras having a field of view that encompasses a distinct section of said writing surface, fields of view of adjacent digital cameras overlapping slightly.*

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In analogous art, Saund et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward from a wall surface. Specifically, Saund et al. teach, as shown in figures 1, 3, and 4 and as stated in column 3 (lines 10 – 49), a camera system with a camera head (54) capturing an image of a target area (52), wherein the camera head supports a plurality of digital cameras (“array of fixed or rotatable cameras”), each of said digital cameras (54) having a field of view that encompasses a distinct section of said writing surface (see figure 3), fields of view of adjacent digital cameras overlapping slightly (see figure 4).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a camera head that supports a plurality of digital cameras, each of said digital cameras having a field of view that encompasses a distinct section of said writing surface, fields of view of adjacent digital cameras overlapping slightly (as taught by Saund et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing an image of a board surface that eliminates the effects of variable illumination and artifacts* (see Saund et al.; column 1, line 65 – column 2, line 2).

32. As for **Claim 10**, Saund et al. disclose, as shown in figures 1, 3, and 4 and as stated in column 3 (lines 10 – 49), wherein said camera head supports a pair of digital cameras. The Examiner submits the claim language such that a pair of digital cameras corresponds to at least two digital cameras.

33. As for **Claim 11**, Saund et al. disclose, as shown in figures 1, 3, and 4 and as stated in column 3 (lines 10 – 49), wherein said camera head supports three digital cameras. The

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Examiner submits the claim language such that a pair of digital cameras corresponds to at least two digital cameras.

34. **Claims 14 – 22, 60, 61, 69, 70, 72, 73, 75, 76 and 78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Komori et al. (JP 08-108689 A) in further view of Kuno (US 6,567,121 B1).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

35. As for **Claim 14**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said controller is coupled to a computer network and uses resources of said computer network*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller is coupled to a computer network and uses resources of said computer network*.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller is coupled to a computer network*

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*and uses resources of said computer network* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

36. As for **Claim 15**, Kuno teaches, as stated in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), wherein said controller uses storage, printing, distribution and/or remote viewing resources of said computer network.

37. As for **Claim 16**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said controller has web server capabilities and is coupled to a distributed computer network to allow captured images to be accessed by a user via web browser*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller has web server capabilities and is coupled to a distributed computer network to allow captured images to be accessed by a user via web browser*.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller has web server capabilities and is coupled to a distributed computer network to allow captured images to be accessed by a user via web browser* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.)



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for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

38. As for **Claim 17**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, wherein said controller (control unit/cpu 1) is a dedicated appliance (Kuno recites that the control unit/cpu 1 in conjunction with the external storage device serves a camera server, which is a dedicated appliance).

39. As for **Claim 18**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, the control unit/cpu 1 in conjunction with the external storage device serves a camera server; however, Kuno does not explicitly recite wherein the camera server is comprises a personal computer.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of incorporating a *server* in a personal computer (PC) are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated the server of Kuno in a PC for the *portability* advantages.

40. As for **Claim 19**, Kuno additionally teaches, as stated in column 3 (lines 17 – 29), forwarding said electronic image to a secondary location for storage (external storage device 6).

41. As for **Claim 20**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera server; however, Kuno does not explicitly recite wherein the camera server is provided with a display to present the digital image.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of incorporating a *display to present the digital image* in a server are well known and

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expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated a display to present the digital image in the server of Kuno for the advantage of *real-time image file management and editing capabilities*.

42. As for **Claim 21**, Ishikawa et al. disclose processing said image to yield high contrast pen strokes (“pens 3, 4, and 5 of three colors of red, green, and blue”) on a white or empty background (see Abstract).

43. As for **Claim 22**, Ishikawa et al. clearly disclose, in paragraph 11, wherein said high contrast pen strokes are in color (“pens 3, 4, and 5 of three colors of red, green, and blue”).

44. As for **Claim 60**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said controller is coupled to a computer network and uses resources of said computer network*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller is coupled to a computer network and uses resources of said computer network*.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller is coupled to a computer network and uses resources of said computer network* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

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45. As for **Claim 61**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said controller has web server capabilities and is coupled to a distributed computer network to allow captured images to be accessed by a user via web browser.*

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller has web server capabilities and is coupled to a distributed computer network to allow digital output images to be accessed by a user via web browser.*

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller has web server capabilities and is coupled to a distributed computer network to allow digital output images to be accessed by a user via web browser* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

46. As for **Claim 69**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *posting said image to a site in response to user input to allow said image to be accessed by a user through a client browser application.*

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On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in column 8 (lines 11 – 40), *posting said image to a site in response to user input to allow said image to be accessed by a user through a client browser application*, as claimed.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *posting an image to a site in response to user input to allow said image to be accessed by a user through a client browser application* (as taught by Kuno) in the image publication method (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

47. As for **Claim 70**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera server. Furthermore, Kuno teaches, column 5 (line 39) and as shown in figure 7, that the camera server in figure 1 is given a URL (www.foo.co.jp). Therefore, Kuno teaches wherein said controller (1) includes a web server having a dedicated web address.

48. As for **Claim 72**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 controls camera image taking operations and a camera server operation; however, Kuno does not explicitly recite buttons to operate the camera to acquire images and post images to the site.

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However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of providing a camera system with a main controlling unit having a plurality buttons for acquiring images and performing operations on acquired images are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have provided in Kuno's camera system (figure 1) a first button actuable by an operator to cause said controller to condition said imaging device to acquire an image, and a second button actuable by an operator to cause said controller to post said acquired image to said site for the advantage of providing *real-time image file management and editing capabilities*.

49. As for **Claim 73**, as indicated below (see Official Notice of Claim 68), the Examiner submits that it would have obvious to one with ordinary skill in the art to have mounted the controller on the wall surface/writing surface of Ishikawa et al. for the advantage of *providing a controller that is of an easy configuration such that the controller is able to avoid becoming a user's trouble in a time of non-use*.

50. As for **Claim 75**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a "high-definition electronic filing document"; however, Ishikawa et al. is silent with respect to *posting said image to a site in response to user input to allow said image to be accessed by a user through a client browser application*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno

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additionally teaches, in column 8 (lines 11 – 40), *posting said image to a site in response to user input to allow said image to be accessed by a user through a client browser application*, as claimed.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *posting an image to a site in response to user input to allow said image to be accessed by a user through a client browser application* (as taught by Kuno) in the image publication method (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

51. As for **Claim 76**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera server. Furthermore, Kuno teaches, column 5 (line 39) and as shown in figure 7, that the camera server in figure 1 is given a URL (www.foo.co.jp). Therefore, Kuno teaches wherein said controller (1) includes a web server having a dedicated web address.

52. As for **Claim 78**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 controls camera image taking operations and a camera server operation; however, Kuno does not explicitly recite buttons to operate the camera to acquire images and post images to the site.

53. However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of providing a camera system with a main controlling unit having a plurality buttons for acquiring images and performing operations on acquired images are well known and expected in the art. At the time the invention was made, it would have been obvious to one with

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ordinary skill in the art to have provided in Kuno's camera system (figure 1) a first button actuable by an operator to cause said controller to condition said imaging device to acquire an image, and a second button actuable by an operator to cause said controller to post said acquired image to said site for the advantage of providing *real-time image file management and editing capabilities*.

**54. Claim 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Komori et al. (JP 08-108689 A) in view of Kuno (US 6,567,121 B1) in further view of Haskin (US 5,790,910).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

55. As for **Claim 77**, Ishikawa discloses a wall mount (as recited above); however, Ishikawa is silent with respect to the structural details of the wall mount. Specifically, Ishikawa is silent with respect to the boom being coupled to a mount that is secured to said wall surface.

On the other hand, Haskin also provides a camera system for capturing an image of a target area. Specifically, Haskin teaches, as shown in figure 1, a camera (22) attached to a distal end (28) of a boom assembly (20) mounted, via a wall mount (37), on a wall surface (23). Haskin additionally teaches, as further shown in figure 1, the boom (20) being coupled to a mount (37) that is secured to said wall surface (23).

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At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporate the boom being coupled to a mount that is secured to said wall surface (as taught by Haskin) in the camera system with boom assembly mounted on a wall surface (as disclosed by Ishikawa) for the advantage of *providing a mounting assembly that is easy to adjust once in place and that permits mounting directly to an electrical junction box* (see Haskin; column 1, lines 14 – 25).

56. **Claims 23 – 26, 28 – 31, 39, 41, 42, 44 – 52, 54, 55, 62 – 65, 67, 79, 80 – 85, 93 – 95, 98 – 101, 104, 105, 110 and 111** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ishikawa et al. (JP 09-224111 A) in view of Kuno (US 6,567,121 B1) in further view of Komori et al. (JP 08-108689 A).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

57. For **Claim 23**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a camera-based system for capturing images of a writing surface (2) on which pen strokes of one or more color are made (“red”, “green”, and “blue”) comprising:

a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2);



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at least one digital camera (“color camera 9”) supported by said camera head at a location spaced from the plane of said vertical surface (“field 2”; seen clearly from figure 1), said at least one digital camera (9) being oriented so that the field of view thereof encompasses said writing surface (2); and

a controller (output unit 21) being in communication with said at least one digital camera (9), said controller (21) conditioning said at least one digital camera to acquire an image of said writing surface (2), said controller (21) receiving image data from said at least one digital camera (9) and processing said image data to form a digital image of said writing surface (2) including all visible high contrast pen strokes irrespective of color on a white or empty background (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

Finally, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said digital image accessible to a user through a web client application*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said digital image accessible to a user through a web client application*.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said digital image accessible to a user through a*

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*web client application* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

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58. As for **Claim 24**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”. The Examiner considers the Ishikawa et al. output to correspond to the claimed automatic publishing of the digital image.

59. As for **Claim 25**, Kuno additionally teaches, as stated in column 3 (lines 17 – 29), forwarding said electronic image to a secondary location for storage (external storage device 6).

60. As for **Claim 26**, Kuno additionally teaches, as stated in column 5 (lines 52 – 57), wherein said controller processes image data received from said at least one digital camera to reduce the size of said digital image (e.g., compression).

61. As for **Claim 28**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”. The Examiner considers the Ishikawa et al. output to correspond to the claimed saves the digital image in a selected format.

62. As for **Claim 29**, while Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; Ishikawa et al. is silent with respect to JPEG format.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of saving digital images in JPEG format are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have saved the “high-definition electronic filing document” images of Ishikawa et al. as JPEG images for the advantage of *providing a platform-independent, small sized, image file format that allows user-control over file size and image quality.*

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63. As for **Claim 30**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera server; however, Kuno does not explicitly recite wherein the camera server is provided with a display to present the digital image.

64. As for **Claim 31**, Ishikawa et al. disclose, as clearly shown in figure 1, wherein the boom assembly (not expressly labeled) includes a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two* boom arms) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting said at least one digital camera (9).

65. As for **Claim 39**, Ishikawa et al. disclose, as clearly shown in figure 1, wherein said camera head (9) supports a single digital camera (9).

66. As for **Claims 41 and 50**, Ishikawa et al. is silent with respect to the boom assembly having a length of from about 30 to 50 inches, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing

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surface. Therefore, the Examiner concludes that angle A in figure 2 is a 60-degree angle and the adjacent sides, one of which is the boom assembly, are each 35 inches (i.e., exactly half the width of the blackboard writing surface indicated by Komori et al.). Thus, Komori teaches the boom assembly having a length of from about 30 to 50 inches, as claimed.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated the boom assembly having a length of from about 30 to 50 inches (as taught by Komori et al.) in the camera system with a boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing a boom assembly that is of an easy configuration for easy movement such that the boom is able to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

67. As for **Claim 98**, Komori et al. further teach, in paragraph 0013, wherein said user-defined sessions are defined by user input to said controller.

68. As for **Claim 99**, Komori et al. further teach, in paragraph 0013, wherein said user input defines the start and end of each session.

69. For **Claim 42**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a camera-based system for capturing images of a target area (2) comprising:

a board (2) having a writing surface on which information is to be recorded using one or more different colored pen tools (“red”, “green”, and “blue”);

a boom assembly (clearly shown in figure 1; although not expressly labeled) positioned above said board and extending outwardly from said board in a generally horizontal disposition (As clearly shown in figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the target area 2);

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at least one digital camera (“color camera 9”) mounted on said boom assembly at a location spaced from the plane of said target area (“field 2”; seen clearly from figure 1), said at least one digital camera (9) being oriented so that the field of view thereof encompasses said writing surface (2); and

a controller (output unit 21) being in communication with said at least one digital camera (9), said controller (21) being responsive to user input (not explicitly recited; however, all electronic devices inherently require at least some operator input, such as powering the device on/off) and conditioning at least one digital camera (9) to acquire an image of said writing surface (2), said image acquired by said at least one digital camera (9) being conveyed to said controller and processed to form an electronic image of said writing surface (paragraphs 18 and 19) including all visible pen strokes irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

Finally, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to (a) *said controller having Internet server capabilities and said electronic image being published automatically to allow said electronic image to be accessed by a user through a web client application* and (b) *wherein the board is mounted on a wall*.

In regards to (a), Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno

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additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller having Internet server capabilities and said electronic image being published automatically to allow said electronic image to be accessed by a user through a web client application.*

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller having Internet server capabilities and said electronic image being published automatically to allow said electronic image to be accessed by a user through a web client application* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

In regards to (b), **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of mounting a writing surface (e.g., whiteboard or blackboard) on a wall are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have mounted the writing surface of Ishikawa et al. on a wall such that the boom assembly extends horizontally outward from the board mounted on the wall for the advantage of *reducing the effects of variable illumination and shadow casting on the writing surface of the board.*

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the

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boom assembly (3) extends generally horizontally from the wall surface/target area (1).

Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user’s trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

70. As for **Claim 44**, Kuno additionally teaches, as stated in column 3 (lines 17 – 29), forwarding said electronic image to a secondary location for storage (external storage device 6).

71. As for **Claim 45**, Kuno additionally teaches, as stated in column 5 (lines 52 – 57), wherein said controller processes image data received from said at least one digital camera to reduce the size of said digital image (e.g., compression).

72. As for **Claim 46**, Ishikawa et al. disclose processing said image to yield high contrast pen strokes (“pens 3, 4, and 5 of three colors of red, green, and blue”) on a white or empty background (see Abstract).



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73. As for **Claim 47**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; thus, Ishikawa et al. disclose wherein said controller saves said electronic image in a selected format.

74. As for **Claim 48**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera server; however, Kuno does not explicitly recite wherein the camera server is provided with a display to present the digital image.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of incorporating a *display to present the digital image* in a server are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated a display to present the digital image in the server of Kuno for the advantage of *real-time image file management and editing capabilities*.

75. As for **Claim 49**, Ishikawa et al. disclose, as clearly shown in figure 1, wherein the boom assembly (not expressly labeled) includes a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting said at least one digital camera (9).

76. For **Claim 51**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, an image publication and distribution method comprising the steps of:

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acquiring an image of a writing surface (“field 2”) that includes all visible information recorded (“alphabetic characters” 6 and “graphic” 8) on said writing surface (2) made via one or more different colored pen tools (“red”, “green”, and “blue”) using an optical recording device (“color camera 9”), said optical recording device (2) being mounted on a generally horizontal boom positioned above said target area (As clearly shown in figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the target area 2);

processing said image to yield a digital output image comprising high contrast pen strokes (“pens 3, 4, and 5 of three colors of red, green, and blue”) on a white or empty background (see Abstract) irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

Finally, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *posting said output image to a site in response to user input to allow said output image to be accessed by a user through a client browser application.*

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in column 8 (lines 11 – 40), *posting said output image to a site in response*

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*to user input to allow said output image to be accessed by a user through a client browser application, as claimed.*

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *posting an image to a site in response to user input to allow said output image to be accessed by a user through a client browser application* (as taught by Kuno) in the image publication method (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according

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to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

77. As for **Claim 52**, Kuno additionally teaches, as stated in column 3 (lines 17 – 29), forwarding said digital output image to a secondary location for storage (external storage device 6).

78. As for **Claim 54**, Kuno additionally teaches, as stated in column 8 (lines 37 – 40), presenting said digital output image on a display device while said digital output image is being posted.

79. As for **Claim 55**, Ishikawa et al. clearly disclose, in paragraph 11, wherein said high contrast pen strokes are in color (“pens 3, 4, and 5 of three colors of red, green, and blue”).

80. For **Claim 62**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a system for capturing an image comprising:

an arm (clearly shown in figure 1; although not expressly labeled) configured to extend outwardly from a generally vertical surface (“field 2”);

an imaging device (“color camera 9”) mounted adjacent a distal end of said arm (@ vertex of both support arms) at a location laterally spaced from said surface (again, clearly shown in figure 1), said imaging device (9) being operable to capture an image of a write board mounted on said surface below said arm (see paragraphs 11 and 12); and

a controller (“output unit 21”) in communication with said imaging device (9), said controller (21) conditioning said imaging device (9) to acquire an image of said write board (2)

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in response to operator input (not explicitly recited; however, all electronic devices inherently require at least some operator input, such as powering the device on/off) and processing the acquired at least one image to yield a digital output image, said digital output image comprising all visible pen strokes on said write board (2) irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

Finally, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said controller further posting said acquired image to a site accessible to a user through a web client application in response to operator input*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller further posting said acquired image to a site accessible to a user through a web client application in response to operator input*.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller further posting said acquired image to a site accessible to a user through a web client application in response to operator input* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the

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advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

81. As for **Claim 63**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera

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server. Furthermore, Kuno teaches, column 5 (line 39) and as shown in figure 7, that the camera server in figure 1 is given a URL (www.foo.co.jp). Therefore, Kuno teaches wherein said controller (1) includes a web server having a dedicated web address.

82. As for **Claim 64**, Ishikawa et al. show an arm (clearly shown in figure 1; although not expressly labeled) configured to extend outwardly from a generally vertical surface (“field 2”). Furthermore, Ishikawa et al. clearly show wherein said arm (again not expressly labeled) is coupled to a mount (clearly shown in figure 1; although not expressly labeled) that is configured to be secured to said surface (2).

83. As for **Claim 66**, Ishikawa et al. disclose that the camera (9) yields high-definition images (see paragraph 18). A digital camera is required for high-definition images.

Accordingly, the color camera (9) of Ishikawa et al. is a digital camera.

84. As for **Claim 67**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 controls camera image taking operations and a camera server operation; however, Kuno does not explicitly recite buttons to operate the camera to acquire images and post images to the site.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of providing a camera system with a main controlling unit having a plurality buttons for acquiring images and performing operations on acquired images are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have provided in Kuno’s camera system (figure 1) a first button actuable by an operator to cause said controller to condition said imaging device to acquire an image, and a second button actuable by an operator to cause said controller to post said acquired

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image to said site for the advantage of providing *real-time image file management and editing capabilities*.

85. As for **Claim 104**, Komori et al. further teach, in paragraph 0013, wherein said user-defined sessions are defined by user input to said controller.

86. As for **Claims 105**, Komori et al. further teach, in paragraph 0013, wherein said user input defines the start and end of each session.

87. For **Claim 79**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a camera-based system for capturing images of a writing surface (2) comprising:

a generally horizontally extending boom assembly (clearly shown in figure 1; although not expressly labeled), said boom assembly being positioned above said writing surface (As clearly shown in figure 1, the camera 9 is positioned via two support arms, not labeled, that extend *horizontally* and *perpendicularly* from the plane of the writing surface (2);

at least one digital camera (“color camera 9”) mounted on said boom assembly at a location spaced from the plane of said target area (“field 2”; seen clearly from figure 1), said at least one digital camera (9) being oriented so that the field of view thereof encompasses said writing surface (2); and

a controller (output unit 21) being in communication with said at least one digital camera (9), said controller (21) receiving image data from said at least one digital camera (9) and processing said image data to form a digital output image of said writing surface (2) including all visible high contrast pen strokes (“pens 3, 4, and 5 of three colors of red, green, and blue”) irrespective of color (see Response to Arguments above; also see human English-language



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translation of Ishikawa et al.; paragraphs 0012 – 0014) on a white or empty background (see Abstract),

Finally, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said controller having Internet server capabilities and being coupled to a distributed computer network to allow said digital image to be accessed by a user through an Internet browser.*

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said controller having Internet server capabilities and being coupled to a distributed computer network to allow said digital image to be accessed by a user through an Internet browser.*

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said controller having Internet server capabilities and being coupled to a distributed computer network to allow said digital image to be accessed by a user through an Internet browser* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

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On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

88. As for **Claim 80**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, wherein said controller (control unit/cpu 1) is a dedicated appliance (Kuno recites that the control unit/cpu 1 in conjunction with the external storage device serves a camera server, which is a dedicated appliance).

89. As for **Claim 81**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, the control unit/cpu 1 in conjunction with the external storage device serves a camera server;

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however, Kuno does not explicitly recite wherein the camera server is comprises a personal computer.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of incorporating a *server* in a personal computer (PC) are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated the server of Kuno in a PC for the *portability* advantages.

90. As for **Claim 82**, Kuno additionally teaches in column 3 (lines 17 – 29), wherein said controller (control unit/cpu 1) sends said digital image to a designated secondary storage location (PC 1101) in said distributed computer network (Internet). Kuno shows in figure 12 a user utilizing a PC (1101) with a connection to the Internet for the purpose of downloading images to the PC (1101) through a client browser program (see column 8, lines 11 – 40).

91. As for **Claim 83**, Kuno additionally teaches in column 3 (lines 17 – 29) and in figure 1, that the control unit/cpu 1 in conjunction with the external storage device serves as a camera server; however, Kuno does not explicitly recite wherein the camera server is provided with a display to present the digital image.

However, **Official Notice** (MPEP § 2144.03) is taken that both the concepts and advantages of incorporating a *display to present the digital image* in a server are well known and expected in the art. At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated a display to present the digital image in the server of Kuno for the advantage of *real-time image file management and editing capabilities*.

92. As for **Claim 84**, Ishikawa et al. clearly disclose, in paragraph 11, wherein said high contrast pen strokes are in color (“pens 3, 4, and 5 of three colors of red, green, and blue”).

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93. For **Claim 85**, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 11 – 20, a camera-based system for capturing images of a writing surface (2) comprising:

a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two* boom arms) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9);

at least one digital camera (“color camera 9”) supported by said camera head at a location spaced from the plane of said vertical surface (“field 2”; seen clearly from figure 1), said at least one digital camera (9) being oriented so that the field of view thereof encompasses said writing surface (2); and

a controller (output unit 21) being in communication with said at least one digital camera (9), said controller (21) conditioning said at least one digital camera to acquire an image of said target area (2), said controller (21) receiving image data from said at least one digital camera (9) and processing said image data to form a digital output image of said writing surface (2), comprising all visible pen strokes on said writing surface (2) irrespective of the pen tool used to make said pen strokes (see Response to Arguments above; also see human English-language translation of Ishikawa et al.; paragraphs 0012 – 0014).

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Finally, Ishikawa et al. disclose, as shown in figure 1 and as indicated in paragraphs 18 and 19, an output unit (21) is provided for outputting a “high-definition electronic filing document”; however, Ishikawa et al. is silent with respect to *said digital output image accessible to a user through a web client application*.

On the other hand, Kuno analogously provide a camera for capturing an image of a target area and output unit for outputting the image. More specifically, Kuno teaches, as shown in figures 1, 10, and 12, a camera (100) and a output unit (control unit/cpu 1), wherein Kuno additionally teaches, in columns 3 (lines 17 – 29) and 8 (lines 11 – 40), *said digital output image accessible to a user through a web client application*.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included functionality for *said digital image accessible to a user through a web client application* (as taught by Kuno) in the camera-based system (disclosed by Ishikawa et al.) for the advantage of user enjoyment/observation of live images of various locations at remote locations (see Kuno; column 1, lines 15 – 20).

However, Ishikawa et al. in view of Kuno are silent with respect to where said controller grouping output digital images according to user-defined sessions, as claimed.

On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is

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exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) it remains centered with respect to the writing surface. Additionally, Komori teaches where said controller groups output digital images according to user-defined sessions (see translation paragraph 13).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated where said controller groups output digital images according to user-defined sessions (as taught by Komori et al.) in the camera system (disclosed by Ishikawa et al.) for the advantage of *providing an assembly that is of an easy configuration so as to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

94. As for **Claim 93** (also see 112, second paragraph, rejection above), Ishikawa et al. disclose, as clearly shown in figure 1, wherein said camera head (9) supports a single digital camera (9).

95. As for **Claim 94**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said digital camera is pivotally mounted on said camera head and is moveable about an*

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*arc to capture images of distinct sections of said target area, images of adjacent distinct sections of said target overlapping.*

In analogous art, Byrd et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward from a wall surface. Specifically, Byrd et al. teach, as shown in figure 1, a camera system with a digital camera (20) capturing an image of a target area (10), wherein the digital camera is attached to the distal end (14) of a boom assembly (see figures 9 – 11), wherein the boom assembly extends outward from a wall surface (134). However, Byrd et al. additionally teach, as shown in figures 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said target area, images of adjacent distinct sections of said target overlapping (The 360° camera movement of Byrd et al. corresponds to the claimed “arc”).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said target area, images of adjacent distinct sections of said target overlapping. (as taught by Byrd et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing 360° image rotation such that a single user may be able to properly orient the camera system and generate understandable video images* (see Byrd et al.; column 2, lines 11 – 35).

96. As for **Claim 95**, Ishikawa et al. is silent with respect to the boom assembly having a length of from about 30 to 50 inches, as claimed.

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On the other hand, Komori et al. also provide a camera system capturing images of a target area having a boom assembly. Specifically, Komori et al. teach, as shown in figures 1 and 2, a wall surface/target area (1) having a boom assembly (3) connected thereto, wherein the boom assembly (3) extends generally horizontally from the wall surface/target area (1). Furthermore, in paragraphs 007 – 009, Komori et al. indicate that the blackboard writing surface has common dimensions of 900 mm by 1800 mm (~ 35” by 70”) and that the boom arm is exactly have the length of blackboard writing surface and that when the boom assembly is extended outward from the surface/area (1) is remains centered with respect to the writing surface. Therefore, the Examiner concludes that angle A in figure 2 is a 60-degree angle and the adjacent sides, one of which is the boom assembly, are each 35 inches (i.e., exactly half the width of the blackboard writing surface indicated by Komori et al.). Thus, Komori teaches the boom assembly having a length of from about 30 to 50 inches, as claimed.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporated the boom assembly having a length of from about 30 to 50 inches (as taught by Komori et al.) in the camera system with a boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing a boom assembly that is of an easy configuration for easy movement such that the boom is able to avoid becoming a user's trouble in a time of non-use* (see Effect of the Invention paragraph of Komori et al.).

97. As for **Claims 98, 100, 104 and 110**, Komori et al. further teach, in paragraph 0013, wherein said user-defined sessions are defined by user input to said controller.

98. As for **Claims 99, 101, 105 and 111**, Komori et al. further teach, in paragraph 0013, wherein said user input defines the start and end of each session.



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99. **Claims 32 and 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Kuno (US 6,567,121 B1) in view of Komori et al. (JP 08-108689 A) in further view of Haskin (US 5,790,910).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

100. As for **Claims 32 and 86**, Ishikawa discloses a wall mount (as recited above); however, Ishikawa is silent with respect to the structural details of the wall mount. Specifically, Ishikawa is silent with respect to the wall mount being releasably coupled to a wall plate secured to said wall surface.

On the other hand, Haskin also provides a camera system for capturing an image of a target area. Specifically, Haskin teaches, as shown in figure 1, a camera (22) attached to a distal end (28) of a boom assembly (20) mounted, via a wall mount (37), on a wall surface (23).

Haskin additionally teaches, as further shown in figure 1, the wall mount (37) being releasably coupled (via screws 34) to a wall plate (38) secured to said wall surface (23).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have incorporate the wall mount being releasably coupled to a wall plate secured to said wall surface (as taught by Haskin) in the camera system with boom assembly mounted on a wall surface (as disclosed by Ishikawa) for the advantage of *providing a mounting assembly that is*

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*easy to adjust once in place and that permits mounting directly to an electrical junction box (see Haskin; column 1, lines 14 – 25).*

101. **Claims 33, 34, 40 and 87 – 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Kuno (US 6,567,121 B1) in view of Komori et al. (JP 08-108689 A) in further view of Byrd et al. (US 6,633,328 B1).**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

102. As for **Claims 33 and 87**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said boom assembly is articulated and moveable between an extended operating position and a folded retracted condition.*

In analogous art, Byrd et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward

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from a wall surface. Specifically, Byrd et al. teach, as shown in figure 1, a camera system with a digital camera (20) capturing an image of a target area (10), wherein the digital camera is attached to the distal end (14) of a boom assembly (see figures 9 – 11), wherein the boom assembly extends outward from a wall surface (134). However, Byrd et al. additionally teach, as shown in figures 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said boom assembly is articulated and moveable between an extended operating position and a folded retracted condition.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a boom assembly that is articulated and moveable between an extended operating position and a folded retracted condition (as taught by Byrd et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing 360° image rotation such that a single user may be able to properly orient the camera system and generate understandable video images* (see Byrd et al.; column 2, lines 11 – 35).

103. As for **Claims 34 and 88**, Byrd et al. disclose, as shown in figures 1 and 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said boom assembly includes a pair of hinges at spaced locations along said boom to enable said boom to fold over itself.

104. As for **Claim 40**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two boom arms*) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera

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head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said target area, images of adjacent distinct sections of said target overlapping.*

In analogous art, Byrd et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward from a wall surface. Specifically, Byrd et al. teach, as shown in figure 1, a camera system with a digital camera (20) capturing an image of a target area (10), wherein the digital camera is attached to the distal end (14) of a boom assembly (see figures 9 – 11), wherein the boom assembly extends outward from a wall surface (134). However, Byrd et al. additionally teach, as shown in figures 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said target area, images of adjacent distinct sections of said target overlapping (The 360° camera movement of Byrd et al. corresponds to the claimed “arc”).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included wherein said digital camera is pivotally mounted on said camera head and is moveable about an arc to capture images of distinct sections of said target area, images of adjacent distinct sections of said target overlapping. (as taught by Byrd et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing 360° image rotation such that a single user may be able to properly orient the camera system and generate understandable video images* (see Byrd et al.; column 2, lines 11 – 35).

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105. As for **Claim 89**, Byrd et al. disclose, as shown in figures 1 and 9 – 11 and as stated in columns 4 (lines 35 – 45) and 8 (lines 6 – 67), wherein each of said hinges includes a locking mechanism to retain said boom assembly in said extended operating position (A “slip ring”, which Byrd et al. provide, is a locking mechanism.).

106. **Claims 36 – 38 and 90 – 92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (JP 09-224111 A) in view of Kuno (US 6,567,121 B1) in view of Komori et al. (JP 08-108689 A) in further view of Saund et al. (US 6,570,612 B1)**

NOTE: A computer translation of Ishikawa et al. and Komori et al. will be used in the following rejections. However, for additional support, a human English-language translation for Ishikawa Masahito et al. by provided by Akiko Smith on March 5, 2007 and a human English-language translation for Komori Shigehiro et al. provided by Schreiber Translation in March 2007 are attached to the Office Action mailed April 23, 2007.

107. As for **Claims 36 and 90**, Ishikawa et al. disclose a boom assembly (not expressly labeled) adapted to extend outwardly from a from a generally vertical surface (2), said boom assembly including a wall mount (not expressly labeled; although the boom is clearly shown to be attached to the upper left and upper right walled surfaces of the electronic blackboard 2), a boom (*two* boom arms) extending outwardly from said wall mount (again not expressly labeled) and a camera head (9) adjacent a distal end of said boom arm (clearly shown in figure 1), said camera head (9) supporting at least one digital camera (9); however, Ishikawa et al. do not disclose *wherein said camera head supports a plurality of digital cameras, each of said digital*

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*cameras having a field of view that encompasses a distinct section of said target area, fields of view of adjacent digital cameras overlapping slightly.*

In analogous art, Saund et al. also disclose a camera system for capturing images of a target area using a camera attached to the distal of end of a boom assembly extending outward from a wall surface. Specifically, Saund et al. teach, as shown in figures 1, 3, and 4 and as stated in column 3 (lines 10 – 49), a camera system with a camera head (54) capturing an image of a target area (52), wherein the camera head supports a plurality of digital cameras (“array of fixed or rotatable cameras”), each of said digital cameras (54) having a field of view that encompasses a distinct section of said target area (see figure 3), fields of view of adjacent digital cameras overlapping slightly (see figure 4).

At the time the invention was made, it would have been obvious to one with ordinary skill in the art to have included a camera head that supports a plurality of digital cameras, each of said digital cameras having a field of view that encompasses a distinct section of said target area, fields of view of adjacent digital cameras overlapping slightly (as taught by Saund et al.) in the camera system with boom assembly (disclosed by Ishikawa et al.) for the advantage of *providing an image of a board surface that eliminates the effects of variable illumination and artifacts* (see Saund et al.; column 1, line 65 – column 2, line 2).

108. As for **Claims 37 and 91**, Saund et al. disclose, as shown in figures 1, 3, and 4 and as stated in column 3 (lines 10 – 49), wherein said camera head supports a pair of digital cameras. The Examiner submits the claim language such that a pair of digital cameras corresponds to at least two digital cameras.

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109. As for **Claims 38 and 92**, Saund et al. disclose, as shown in figures 1, 3, and 4 and as stated in column 3 (lines 10 – 49), wherein said camera head supports three digital cameras. The Examiner submits the claim language such that a pair of digital cameras corresponds to at least two digital cameras.

### ***Conclusion***

110. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

111. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David Ometz can be reached on 571.272.7593. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/  
Primary Examiner  
Group Art Unit 2622  
January 13, 2009**